

What is claimed is:

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1. A method of controlling temperature at a fuel reformer comprising:
sensing said temperature at said fuel reformer; and
adding a first air to said fuel reformer.
2. A method in Claim 1, wherein said temperature is sensed at an inlet of said fuel reformer.
3. A method in Claim 1, comprising heating said first air upstream from said fuel reformer to form a heated air.
4. A method in Claim 3, comprising burning a fuel to heat said first air.
5. A method in Claim 3, comprising heating said first air with an electrical heating device.
6. A method in Claim 3, comprising heating said first air by thermal exchange.
7. A method in Claim 6, further comprising radiatively heating said first air with heat from a fuel cell stack.
8. A method in Claim 3, comprising adding a second air that is cooler than said heated air.
9. A method in Claim 3, comprising mixing a sufficient amount of said heated air with a fuel upstream from an inlet of said fuel reformer to form a mixed stream.
10. A method in Claim 9, comprising adding a second air that is cooler than said mixed stream.

11. A method in Claim 10, comprising controlling amount of said heated air and said second air upstream from said inlet.

12. A method in Claim 1, further comprising purging a reformer zone.

13. A method of controlling temperature at a fuel reformer comprising:

- 5 sensing said temperature at an inlet of said fuel reformer;
heating a first air upstream from said fuel reformer to form a
heated air;
mixing said heated air with a fuel upstream from said fuel
reformer to form a mixed stream; and
adding said mixed stream to said fuel reformer.

14. A method in Claim 13, wherein said heating said first air is by burning a fuel.

15. A method in Claim 13, comprising heating said first air by an electrical heating device.

16. A method in Claim 13, wherein said heating said first air is by thermal exchange.

17. A method in Claim 16, further comprising radiatively heating said first air with heat from a fuel cell stack.

18. A method in Claim 13, comprising adding a second air that is cooler than said heated air.

19. A method in Claim 18, further comprising mixing said second air with said mixed stream.

20. A method in Claim 19, comprising controlling amount of said heated air and said second air upstream from said inlet.

21. A method in Claim 13, comprising purging a reformer zone.

22. A dual air actuator system for use with a fuel reformer comprising:

an air control valve in fluid communication with said fuel reformer, wherein said air control valve supplies a first air; and

5 a temperature sensor in thermal communication with an inlet of said fuel reformer and in operable communication with said air control valves.

23. A dual air actuator system in Claim 22, wherein there are at least two air control valves.

24. A dual air actuator system in Claim 22, further comprising a fuel injector in fluid communication with said fuel reformer.

25. A dual air actuator system in Claim 22, wherein said air control valve is in fluid communication with said fuel reformer via a micro-reformer.

26. A dual air actuator system in Claim 22, wherein said air control valve is in fluid communication with said fuel reformer via an electrical heating device.

27. A dual air actuator system in Claim 22, wherein said first air is in thermal communication with a fuel cell system enclosure.

28. A dual air actuator system in Claim 22, wherein said fuel reformer is in operable communication with a fuel cell stack.

29. A method for producing electrical power at a fuel cell stack comprising:

sensing said temperature at a fuel reformer, wherein said fuel reformer is in operable communication with said fuel cell stack;

5 heating a first air upstream from said fuel reformer to form a heated air;

mixing said heated air with a fuel upstream from said fuel reformer to form a mixed stream;

10 adding said mixed stream to said fuel reformer, said mixed stream having a flow rate;

producing a reformat within said fuel reformer, wherein said reformat has said flow rate;

introducing said reformat to said fuel cell stack; and

producing said electrical power at said fuel cell stack.

30. A method for producing electrical power in Claim 29, wherein said heating said first air is by burning a fuel.

31. A method in Claim 29, comprising heating said first air by an electrical heating device.

32. A method for producing electrical power in Claim 29, wherein said heating said first air is by thermal exchange.

33. A method for producing electrical power in Claim 32, further comprising radiatively heating said first air with heat from a fuel cell stack.

34. A method for producing electrical power in Claim 29, comprising adding a second air that is cooler than said heated air.

35. A method for producing electrical power in Claim 34, further comprising mixing said second air with said mixed stream.

36. A method for producing electrical power in Claim 35, comprising adding a second air that is cooler than said mixed stream.

37. A method for producing electrical power in Claim 35, comprising controlling amount of said heated air and said second air upstream independently from said flow rate.

38. A method for producing electrical power in Claim 29, further comprising controlling said flow rate based on a desired amount of said electrical power.

39. A method for producing electrical power in Claim 29, comprising purging a reformer zone.

40. A dual air actuator system for use with a fuel reformer comprising:

- means for sensing said temperature at said fuel reformer;
- means for heating a first air upstream from said fuel reformer to
- 5 form a heated air;
- means for mixing said heated air with a fuel upstream from said fuel reformer to form a mixed stream; and
- means for adding said mixed stream to said fuel reformer.